

CLAIMS

What is claimed is:

1. A rotor for small motors provided on its shaft with a plurality of rotor magnetic poles of a salient-pole

5 configuration and a commutator unit, each of the rotor magnetic poles being composed of a winding around a laminated core and each of both ends of each wound wire being connected to a commutator leg part coupled with a tip of a corresponding commutator segment of the commutator unit, wherein:

10 a connective portion between the both ends of each of said wound wires and the corresponding commutator leg part is formed by winding a wire stripped of its insulating coat and welding the wound portion.

2. The rotor for small motors, as set forth in claim 1,
15 wherein each of said commutator leg parts comprises a base portion extending from a tip of a commutator segment outward in a direction substantially normal to a radial direction and coupled with the commutator segment and a tip portion narrowed stepwise to let a wound wire end be wound around
20 it.

3. The rotor for small motors, as set forth in claim 2, wherein a disk-shaped varistor having a hole at its center is mounted over the base portions of said commutator leg parts on the reverse side to the winding in an axial direction of
25 a shaft, and each electrode of the varistor is soldered onto the corresponding base portion.

4. The rotor for small motors, as set forth in claim 1, wherein said commutator leg parts are U-shaped and formed of a metal whose melting point is lower than that of copper.

5. The rotor for small motors, as set forth in claim 4, wherein a material of said commutator leg parts is phosphor bronze.

6. A manufacturing method for a rotor for small motors provided on its shaft with a plurality of rotor magnetic poles of a salient-pole configuration and a commutator unit, each of the rotor magnetic poles being composed of a winding around a laminated core and each of both ends of each wound wire being connected to a commutator leg part coupled with a tip of a corresponding commutator segment of the commutator unit, said method comprising steps of:

15 winding a leading end of a wire to be wound fed from a coil winder around one of commutator leg parts a first prescribed number of turns, then winding the wire around a corresponding salient pole a second prescribed number of turns, thereafter similarly winding the wire successively around
20 other commutator leg parts and other salient poles, and winding the wire around the same commutator leg part around which the leading end of the wire to be wound was first wound, and then cutting the wire;

stripping the insulating coat from only the portions
25 to be wound around the commutator leg parts prior to being wound in synchronization with feed of the wire to be wound from the coil winder; and

welding the wound portions of said commutator leg parts.

7. The manufacturing method for a rotor for small motors, as set forth in claim 6, further including steps of punching and cutting out of a reel-wound flat parent metal sheet each of said commutator leg parts having a base portion coupled
5 to a tip of a commutator segment and a tip portion narrowed stepwise to let a wound wire end be wound around it, and at the same time, fixing the commutator leg part to the commutator segment tip outward in a direction substantially normal to a radial direction from the commutator segment tip.

10 8. The manufacturing method for a rotor for small motors, as set forth in claim 7, further including steps of mounting a disk-shaped varistor having a hole at its center over the base portions of said commutator leg parts on the reverse side to the winding in an axial direction of a shaft, and
15 soldering each electrode of the varistor onto the corresponding base portion.

9. The manufacturing method for a rotor for small motors, as set forth in claim 6, wherein said commutator leg parts are U-shaped and formed of a metal whose melting point is
20 lower than that of copper.

10. The manufacturing method for a rotor for small motors, as set forth in claim 9, wherein a material of said commutator leg part is phosphor bronze.